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| 10/650,153 | 08/26/2003 | Timothy J. Collins | CML01464M | 7078 |
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| MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196 | | | EXAMINER AGWUMEZIE, CHARLES C | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|---|---------------------------------------|--|
| Office Action Summary | Application No. 10/650,153 | Applicant(s) COLLINS ET AL. | |
| | Examiner CHARLES C. AGWUMEZIE | Art Unit 3621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-11 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-11, and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/10/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgements

1. Applicants' amendment filed on February 6, 2008 is acknowledged. Accordingly claims 1, 5-11 and 15-20 remain pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 1, 6, 10, 11, and 17**, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed contains no support for **“visibly printed” (claims 1 and 10), “so as to be visible” (claims 6, and 11), and “visible printing” (claim 17)**. There are new claims without support in the specification. This is the first instance of this invention that is unrelated and unsupported by the original filing. Cancellation of new matter is required.

Applicants' arguments dated February 6, 2008 have been considered but are deemed without merit since the applicant argues an invention lacking support in the specification and based entirely on new matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 5-11 and 15-20**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Halperin et al U.S. Patent No. 6,226,619.

6. As per **claims 1, and 10**, Halperin et al discloses a method for determining if an item is a fraudulent item, the method comprising the steps of:

obtaining by radio means a first number (small tag 2, figs. 1 and 2) associated with the item or item's packaging (fig. 1; col. 5, lines 55-65, which discloses "... number read from the tag ...");

determining a second number that is a public-key signature visibly printed on the item (serial number, fig. 1; encrypted serial number see col. 7, lines 30-40) or item's packaging (fig.1; col. 5, lines 55-65, which discloses "serial number on the label"; col. 7, lines 30-40, which discloses "encrypted serial number");

utilizing a public-key cryptographic process and the first number to cryptographically verify the second number (col. 3, lines 5-15, which discloses that "the customer also can check that the serial number and the coded number in the tag are compatible using some public-key"; col. 5, lines 50-65, which discloses that "...verifying

... the number read from the tag with a number on the serial number on the label...”);
and

determining the product's authenticity based on the verification (col. 2, lines 50-55, which discloses that “the item includes indicia ... for comparism with a secret ... designating authenticity”; col. 3, lines 5-15, which discloses that the customer can participate by verifying that different items on shelves have different serial numbers; col. 5, lines 50-65).

7. What Halperin does not explicitly disclose is that the second number is a public-key signature. Halperin however discloses that the serial number is encrypted.

8. Accordingly it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the method of Halperin and substituting or replacing the encrypted serial number by provide the method of determining a second number that is a public-key signature visibly printed on the item since both are designed to ensure security.

9. As per **claim 5**, Halperin et al further discloses the method wherein the step of determining the products authenticity comprises the step of associating the product with an authentic product if the signature is verified, otherwise associating the product with a forged product (fig. 1; col. 2, lines 50-55, which discloses that “the item includes indicia ... for comparism with a secret ... designating authenticity”; col. 4, lines 30-40, which discloses that “the customer verify ... that the encrypted number carried by the tag

corresponds to the unique serial number “, col. 7, lines 10-15, which discloses that “a unique signature is provided by the tag”; col. 7, line 65-col. 8, line 10).

10. As per **claim 6**, Halperin et al further discloses a method of manufacturing a product in order to prevent forgery, the method comprising the steps of:

obtaining by radio means an RFID tag (small tag 2, figs. 1 and 2) comprising a first number (fig. 1; col. 5, lines 55-65, which discloses “... number read from the tag ...”);

determining a second number utilizing the first number and a cryptographic process, wherein cryptographic verification of the second number insures the product's authenticity (fig. 1; “label serial number”, col. 2, lines 50-55, which discloses that “the item includes indicia ... for comparism with a secret ... designating authenticity”, col. 5, lines 50-65, which discloses that the verification operation may include simply verifying ... the number read from the tag with the number on the serial number on the label”; col. 7, lines 30-40, which discloses encrypted serial number);

affixing the first number (small tag 2 affixed to bottle, fig. 1) to either the product or the packaging associated with the product (fig. 1; col. 2, lines 45-55; col. 5, which discloses a tag 72 for being affixed to a high value item”); and

affixing the second number (label serial number 3, fig. 1) to either the product or the packaging associated with the product, so as to be visible (fig. 1; label serial number affixed to the bottle).

11. What Halperin does not explicitly state in text is that the second number is visible. However, it would have been obvious from figures 1, 3, and 5 that the serial number is visible. Accordingly it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the method of Halperin and add the text that the serial number is visible.

12. As per **claim 7**, Halperin et al further discloses the method wherein the step of obtaining the tag comprising the first number comprises the step of obtaining an RFID tag comprising a unique, or semi-unique unalterable number (fig. 1; col. 4, lines 5-15, which discloses that "a tag is used that is preferably unique...that cannot be duplicated").

13. As per **claim 8**, Halperin et al further discloses the method wherein the step of affixing the second number to either the product or the packaging associated with the product comprises the step of printing a cryptographic signature on the product or the product's packaging (col. 7, lines 5-15, which discloses that "a unique signature is provided by a tag").

14. As per **claim 9**, Halperin et al further discloses the method wherein the step of determining the second number utilizing the first number and a cryptographic process comprises the step of utilizing the first number and a private key to generate the second

number (col. 7, lines 35-40, which discloses the use of public and private key(s) to verify the authenticity of the label).

15. As per **claim 11**, Halperin et al discloses a method comprising the steps of:

obtaining by a radio means an RFID tag (small tag 2, figs. 1 and 2) comprising a first number (col. 5, lines 55-65, which discloses "... number read from the tag ...");

utilizing a private key and the first number to create a second number that is a cryptographic signature, such that cryptographic verification of the second number insures a product's authenticity (col. 7, lines 35-40, which discloses the use of public and private key(s) to verify the authenticity of the label); and

affixing the second number (serial number label 3, fig. 1) and the RFID tag (small tag 2, fig. 1) to the item or the item's packaging, so as to be visible (see fig. 1; col. 2, lines 45-55; col. 5, which discloses a tag 72 for being affixed to a high value item").

16. What Halperin does not explicitly disclose is that the second number is a public-key signature. Halperin however discloses that the serial number is encrypted.

17. Accordingly it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the method of Halperin and substituting or replacing the encrypted serial number by provide the method of determining a second number that is a public-key signature visibly printed on the item since both are designed to ensure security.

18. As per **claim 15**, Halperin et al further discloses a product scanner comprising:

an RF tag reader (tag reader 74, fig. 7) outputting contents of an RF tag (fig. 7; tag reader 74; col. 5, lines 1-5, which discloses a tag reader 74 for interrogating the tag 72; col. 5, lines 50-65, which discloses that the tag is interrogated or read by hand-held tag reader 4);

an optical scanner outputting a public-key cryptographic signature (col. 7, lines 10-15, which discloses that “a unique signature is provided by the tag which may be implemented by a bar-code which may be read upon the sale”, Note: Hand-held readers are inherently optical scanners used for reading bar-codes); and

logic circuitry having the contents of the RF tag and the public-key cryptographic signature as an input and outputting information as to whether an item is a forgery (col. 2, lines 45-55, which discloses that “the item includes indicia ... for comparism with a secret ... designating authenticity”).

19. What Halperin does not explicitly disclose is an optical scanner. Halperin however discloses a hand-held tag reader which are by their nature scanners.

20. Accordingly it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the method of Halperin and substituting or replacing the handheld reader by providing an optical scanner as claimed since both are designed to perform the same function of reading and outputting data.

21. As per **claim 16**, Halperin et al further discloses the product scanner wherein the logic circuitry utilizes a public key and cryptographic operations to verify the cryptographic signature (col. 3, lines 5-15, which discloses that “the customer also can

check that the serial number and the coded number in the tag are compatible using some public-key”, col. 4, lines 25-40; col. 5, lines 50-65; col. 7, lines 10-15, which discloses that “a unique signature is provided by the tag).

22. As per **claim 17**, Halperin et al discloses an apparatus comprising:

an RF reader (hand-held reader 4, fig. 1 or tag reader 74, fig. 7) outputting contents of an RF tag (fig. 1; col. 5, lines 50-65, which discloses that the tag is interrogated or read by hand-held tag reader 4);

logic circuitry having the contents of the RF tag as an input and outputting a public-key cryptographic signature based on the contents of the RFID tag (fig. 1 and 2; col. 2, lines 45-55, col. 7, lines 10-15, which discloses that “a unique signature is provided by the tag which may be implemented by a bar-code which may be read upon the sale”); and

printing circuitry having the public-key cryptographic signature as an input wherein the printing circuitry commands a visible printing of the public-key cryptographic signature upon an item or packaging (fig. 1; col. 4, “burned-in”; col. 7, lines 5-15, which discloses that “a unique signature is provided by a tag”).

23. What Halperin does not explicitly state in text is that the printing circuitry commands a visible printing of the public-key cryptographic signature. However, it would have been obvious from figures 1, 3, and 5 that the tag which contains the signature is visible. Accordingly it would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to modify the method of Halperin and add the text

that the printing circuitry commands a visible printing of the public-key cryptographic signature.

24. As per **claim 18**, Halperin et al further discloses the apparatus further comprising: an RF writer outputting product information for the item to the RF tag (col. 4, lines 45-55, which discloses that “the tag reader also would modify or write to the tag”).

25. As per **claims 19 and 20**, Halperin further discloses the method wherein a barcode is used for rendering the second number that is printed on the item or item's packaging (col. 5, line 65-col. 6, line 5, which discloses verifiable by scanning ...of course a barcode label may be provided with encrypted information)

26. **Claim 15-16**, as understood by the Examiner, are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Halperin et al U.S. Patent No. 6,226,619 in view of Appalucci et al U.S. patent Application Publication No. 2003/0057276 A1¹.

27. As per **claim 15**, Halperin et al further discloses a product scanner comprising:
an RF tag reader (tag reader 74, fig. 7) outputting contents of an RF tag (fig. 7; tag reader 74; col. 5, lines 1-5, which discloses a tag reader 74 for interrogating the tag

¹ See MPEP § 2112 expressly authoring alternative § 102/§103 rejections when the question of inherency is present in the anticipation rejection.

72; col. 5, lines 50-65, which discloses that the tag is interrogated or read by hand-held tag reader 4);

an optical scanner outputting a public-key cryptographic signature (col. 7, lines 10-15, which discloses that “a unique signature is provided by the tag which may be implemented by a bar-code which may be read upon the sale”, Hand-held readers are inherently optical scanners used for reading bar-codes); and

logic circuitry having the contents of the RF tag and the public-key cryptographic signature as an input and outputting information as to whether an item is a forgery (col. 2, lines 45-55, which discloses that “the item includes indicia ... for comparison with a secret ... designating authenticity”).

28. It is the Examiner principal position that handheld scanners are inherently and well known as optical scanners. However if not found inherent, Appalucci et al directly teaches the use of optical scanners to read and/or output a public-key cryptographic signature.

29. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Halperin et al in view of the teachings of Appalucci et al to include optical scanner to read and /or output the public-key cryptographic signature in order to establish the product authenticity by comparing the signature with the second number.

Response to Arguments

30. Applicant's arguments filed February 6, 2008 have been fully considered but they are not persuasive.

31. With respect to **claims 1 and 10**, Applicant argues that Halperin et al does not describe a public-key cryptographic signature or cryptographic signature. That the office action is equating the term "a unique signature" with "public-key cryptographic signature"

32. In response, Examiner respectfully disagrees and submits that Halperin et al clearly discloses that "a unique signature is provided by a tag" (col. 7, lines 5-15 "unique signature"). Halperin's signature is cryptographically decrypted or by means of cryptography using public and private keys. To suggest otherwise is a mischaracterization of Halperin's invention. Alternatively and for the sake of argument, it would still be obvious to substitute the unique signature provided by the tag with the claimed "public-key signature" after all they both provide the same functionality.

33. With respect to **claims 11-17**, Applicant argues that Halperin describes interrogatable, or readable tags that are read by interrogation device upon sale of an item and for this reason Halperin does not describe an item having a cryptographic signature that is visible.

34. In response, Examiner respectfully disagrees and submits that while Halperin does not explicitly disclose in the text that the signature is visible, it would have been obvious from the figs that the tag that contains the signature is visible to one of ordinary skill in the art. Secondly Applicant is arguing an invention that has no support in the

specification. Examiner has searched Applicant's specification and there is no instance of the word visible or visibly as Applicant appear to claim.

35. With respect to **claim 6**, Applicant argues that the serial number is not understood to mean a cryptographically encoded number to those of ordinary skill in the art and is not described in Halperin as such.

36. In response, Examiner respectfully disagrees and submits that Halperin does describe the serial number as encrypted (encrypted serial number see col. 7, lines 30-40).

37. With respect to **claim 11**, Applicant argues that Halperin does not describe its serial number as cryptographically encrypted number as claimed by the Applicant.

38. In response, Examiner respectfully disagrees and submits that Halperin does describe the serial number as encrypted (encrypted serial number see col. 7, lines 30-40).

39. With respect to **claim 15**, Applicant argues that no where in Halperin is a product scanner described that includes both a tag reader and a bar-code reader.

40. In response, Examiner states that the hand-held tag reader is a clear substitute for an optical scanner as claimed.

41. With respect to **claim 17**, Applicant argues that the office action misquoted Halperin when it stated that a unique signature is provided by the tag which may be implemented by a bar-code which may be read upon the sale. That it is not possible to conclude that the tag is implemented by a bar code because the tag is the interrogatable tag for which bar-code reading is not described.

42. In response, Examiner disagrees with Applicant characterization and state that Halperin does disclose the claimed limitation as shown in the rejection. Furthermore Halperin is replete with scanning machine operation (col. 4, lines 30-40). How does one scan an item if there is not scanner?

43. Applicant further argues that nowhere has identified it a printed public-key cryptographic signature.

44. In response, Examiner states that Halperin does describe burning in the tag which contains the signature onto the item or the item packaging. Alternatively it would have been obvious to substitute the burning in with the printing since both achieve the same objective permanently affixing the signature on the package or item.

Conclusion

45. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

46. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

47. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the applicant, in preparing the responses, fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles C. Agwumezie whose number is **(571) 272-6838**. The examiner can normally be reached on Monday – Friday 8:00 am – 5:00 pm.

49. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on **(571) 272 – 6779**.

50. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free). If you would like assistance from a USPTO

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Customer Service Representative or access to the automated information system, call
800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charlie C Agwumezie
Examiner, Art Unit 3621
May 13, 2008

/ANDREW J. FISCHER/
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